UNITED STATES MARINE CORPS
MARINE CORPS MATERIEL COMMAND
814 RADFORD BOULEVARD
ALBANY, GEORGIA 31704-0301

MCO 3000.11E
LPO

MARINE CORPS ORDER 3000.11E

From: Commandant of the Marine Corps
To: Distribution List

Subj: MARINE CORPS AUTOMATED READINESS EVALUATION SYSTEM (MARES)

Ref: (a) MCO P3000.13E
(b) UM 4790-5
(c) MCO 5311.1C
(d) MCO P4400.82F
(e) MCO P4400.150E
(f) MCO P4790.2C

Encl: (1) Resource Reporting Methodology
(2) Materiel Readiness Reporting Calculations
(3) Detailed Materiel Readiness Reporting

1. Purpose

a. To provide a realistic portrayal of a functional area (FA), table of authorized materiel control number (TAMCN), Marine Forces (MARFOR), Marine Expeditionary Force (MEF), major subordinate command (MSC), or unit's capability to perform its assigned mission. Fifth element organizations referred to as bases, posts, and stations (BPS) also fall under the direction of this Order. The process developed for monitoring the ground equipment capability within the Marine Corps is the MARES, with the Commandant of the Marine Corps (CMC), Logistics Plans, Policies, and Strategic Mobility (LP) responsible for functional management.

b. All commands and all levels will report Marine Corps Materiel Readiness (MR) per references (a) through (f) and this Order.

2. Cancellation. MCO 3000.11C.

3. Summary of Revision. This Order incorporates changes in terminology to support Status of Resources and Training System (SORTS) (reference (a)) as well as creating an integrated plan to identify and track equipment for use by the Joint Chiefs of Staff (JCS) operations and logistics sections (J-3 and J-4). Additionally, it includes clarification of MR formulas and procedures for documenting the status of new and excess equipment within the MARFORs to include some command adjustment procedures.

4. Background

a. MARES is a command information system with an overall objective to provide information concerning ground equipment status of MARFOR units and selected commands.

b. Asset Tracking for Logistics and Supply Systems (ATLASS) and Marine Corps Integrated Maintenance Management System (MIMMS) integrate supply and maintenance information to provide status and visibility of ground equipment. MARES retrieves, integrates, and processes the unit-provided data to:

(1) Reflect the current status of selected ground equipment authorized and possessed by reporting commands/units. Reportable equipment is identified annually in a Marine Corps Bulletin (MCBul) in the 3000 series entitled "Marine Corps Automated Readiness Evaluation System (MARES)."

(2) Provide the identification of MARES-tracked equipment excesses and deficiencies within the reporting unit.

(3) Present an overview of the effectiveness of the maintenance and supply systems in support of Marine Corps reportable items.

(4) Provide data that reflects information regarding the measure of an organization's equipment capability. The "S" rating indicates the measurement of an organization's materiel on-hand posture. The "R" rating indicates the condition of the equipment an organization has on-hand, without regard to that organization's table of equipment (T/E). For use in SORTS reporting, see enclosure (1).

(5) MARES additionally provides an overall assessment of a unit's "MR" rating for stratification of the performance at various levels (i.e., FAs/equipment type/organization, etc.) within the Marine Corps as defined by enclosures (1), (2), and (3).

5. MARES/SORTS Relationship

a. SORTS is a JCS reporting system, which provides identity and status information concerning designated military organizations. MARES reflects the actual operational status of reportable mission-essential/principal end items (PEI), end item ground equipment possessed (on-hand) by each reporting unit.

b. Equipment status reflected by MARES will be used to support unit equipment readiness ratings (e.g., "S" rating - equipment/supplies on hand; "R" rating – equipment condition).

c. MARES provides supplemental data used solely within the Marine Corps to monitor the status of Major-Essential Equipment (MEE) and selected PEI. Equipment status information can be aggregated from the battalion, squadron, and separate company level all the way up to and including MEF's.

d. MARES data, although similar in format to SORTS, is not a part of the SORTS report. The numeric percentages of MEE and PEI are displayed in the appropriate SORTS remarks records, which serve to further clarify or amplify the category level.

e. MEE Background. MEE is individually reported in SORTS and is listed in the global SORTS file within reference (a). MEE is used to monitor JCS and combatant command's equipment of interest. This file is maintained by the Deputy Commandant, Plans, Policies, and Operations, (POR).

6. Definition of MARES Categories

a. Reportable PEIs. Reportable PEIs are those PEIs, which have been nominated by MARFORs, or supporting commands (e.g., Marine Corps Combat Development Command (MCCDC), Marine Corps Logistics Command (MCLC), Marine Corps Systems Command (MCSC)) for MARES reporting. First, these items have been designated as "combat essential" in the Total Force Structure Management System (TFSMS). Secondly, these PEIs may have a combat active replacement factor (CARF). Finally, these PEIs are reported as fielded to an acceptable level within the operating forces or as directed by the Deputy Commandant, Installations and Logistics (DC, I&L).

(1) Those PEIs selected for MARES reporting do not include all equipment contained in the Marine Corps' inventory. The items selected; however, are of sufficient range to provide an adequate measure of overall equipment status or capability for MARFORs.

(2) To preclude gross distortions of equipment status percentages, items whose serviceability/operational capability undergo frequent inspection or which can be readily replaced by the unit's first source of supply are not reportable (e.g., rifles and gas masks). Non-reparable items are also excluded from MARES reporting.

b. MEE. MEE are items of equipment whose availability is essential and indispensable for the execution of the mission of the unit in support of a combatant commander. Force commanders may submit recommendations for MEE to DC PP&O via DC I&L. Final decision for MEE lies with the Joint Staff (J3).

(1) Items designated as MEE are of such importance that they are subject to continuous monitoring throughout the DoD.

(2) MEE items are identified in enclosure (1) of a MCBul in the 3000 series in the Major Essential Equipment column.

(3) MEE items may be classified as a critical low-density piece of ground equipment. Therefore, small changes in quantities possessed or equipment condition can lead to wide fluctuations in a unit's "S" and "R" ratings in SORTS.

7. Nomination and Review of MARES Equipment

a. The Marine Corps identifies MARES-tracked equipment as:

(1) Reportable PEI

(2) MEE

(a) MEE is a subgroup of the PEI.

b. MARES reportable equipment is defined as an item of equipment, which is identified in a MCBul in the 3000 series. Before items can be included in this Bulletin, they must meet the following criteria:

(1) PEIs are supportable through publications, fielding, and supply support and are stable in design.

(2) PEIs are nominated for MARES reportable to the DC, I&L by MARFORS or supporting commands (e.g., MCCDC, MCSC, and MCLC).

(3) Final decision for inclusion (or deletion) in the MCBUL 3000 series is determined by DC, I&L.

8. MARES Reportable Modernization Fielding. To remain a Force-in-Readiness, the Marine Corps plans, programs, and budgets annually for the modernization of its equipment and capabilities. The modernization of essential equipment can have a substantial effect on MARES reporting. Accordingly, new and replacement items will be included in MARES reporting during modernization (phase in/out) of equipment, unless otherwise directed by DC, I&L. MARES Reportable Modernization Fielding will fall into one of three categories: new equipment, replacement equipment with the same TAMCN, or replacement equipment with a new TAMCN.

a. New Equipment. Equipment that is not replacing any current MARES Reportable Item. New equipment will require visibility to ensure that a MSC's capability is reported. In those instances when the new equipment is received, and:

(1) T/E Allowances are Planned Allowances: The unit will use the possessed quantity as the authorized quantity pending receipt of the remaining allowance and/or conversion of the planned allowance to an actual allowance. Unit supply representatives will utilize command allowance adjustment entries in ATLASS to reflect an allowance on the Mechanized

Allowance Listing equal to the quantity possessed, and will transmit a request to convert the planned allowance to an actual allowance in the amount of the quantity received.(2) T/E Allowances are Actual Allowances. The unit will cite the possessed quantity and use the HQMC T/E allowance as the authorized quantity. RM4 remarks will document the status of remaining inbound equipment to fill HQMC T/E Allowances.

b. Replacement with Same TAMCN. Equipment replacing an existing MARES Reportable Item using the same TAMCN (e.g., HMMWVA1 being replaced by the HMMWVA2) will be added to possessed quantities with the authorized quantities remaining the same. Possessed quantities for items being replaced will continue to be reported until final disposition.

c. Replacement with New TAMCN. Equipment being replaced by a new MARES Reportable Item with new TAMCN (e.g., M923 Series, 5-Ton being replaced by the MTVR series, 7-ton) will adhere to the following instructions:

(1) For inbound/new equipment, follow the steps listed in paragraph 8a, preceding. to account and report new equipment. For equipment being replaced:

(2) Reduce quantity authorized to equal quantity possessed, as replaced assets are disposed of/shipped to disposition destination. RM4 remarks will be used to indicate quantity of new TAMCN received to offset reduction in reported authorized quantity.

9. MARES Reportable Equipment Change Requirements

a. Changes (nominated additions/deletions) to the reportable PEI/MEE equipment lists will be made on a periodic basis. A revised list will be published annually via a MCBul in the 3000 series.

b. Field commands are invited to recommend changes to the MEE item/reportable end item equipment lists. Recommended changes should be submitted via the chain of command to the CMC (LPO) for consideration by DC, I&L.

c. Since the impact of changes to the MEE items list is far greater than that of other equipment, the proposed changes must undergo a rigorous review during the approval process. Accordingly, MARFOR commanders will include a detailed rationale for the proposed change and will address the need for reporting the equipment in relation to the unit's mission, current and anticipated threats, current doctrine, and supportability.

10. Tracking, Computing, and Reporting Ground Equipment Status

a. MARES provides equipment status to MR managers in an efficient manner. Automation is used to the maximum extent to record, process and store data, and ultimately to produce

management reports. This is accomplished as accurately and rapidly as possible using the optimal amount of equipment resources and personnel available. The features of this system are as follows.

(1) Incorporates supply and equipment data generated from both manual and automated sources.

(2) Integrates data from several sources and interfaces with other systems/applications.

(3) Provides uniform and centralized equipment capability (operational/non-operational) information at each command level.

(4) Provides timely data for commanders to use in their decision-making/risk assessment process.

b. Management reports are tailored for use at various command echelons. Reference (b) contains examples of all MARES reports, which may be produced from the MIMMS databases.

11. Logistics Systems Background and Interfaces. MARES extracts information from various sources including:

a. Stock Control System (SCS). SCS provides wholesale supply management over the PEI quantities.

b. Total Force Structure Management System (TFSMS). TFSMS provides a multitude of equipment data to include the unit allowance and multiples, PEI replacement cost and factors, and PEI management codes.

c. Field Maintenance Subsystem (FMSS). FMSS provides a data repository for the maintenance production and history of equipment/repair parts.

d. Headquarters Maintenance Subsystem (HMSS). HMSS is the consolidated repository for the FMSS histories.

e. Marine Air-Ground Task Force (MAGTF) Data Library (MDL). MDL provides the single source for technical reference data for the MAGTF II logistics automated information system family of systems.

12. SORTS/Resource Computations. The equipment status percentages that appear in the Unit's Resource Report are computed using the formulas and methods discussed in enclosures (1), (2), and (3). SORTS equipment percentages convert directly to resource area category levels for SORTS reporting.

13. Reporting Medium. MARES transactions are input to/generated by the FMSS and reflect the actual status of reportable items. After completion of each ATLASS/MIMMS daily cycle, MARES transactions are automatically segregated by major command and transaction-type.

a. Recognizing that there are currently multiple automated systems in the MSC's, each of them must establish procedures to ensure MARES data sets are transmitted to MCSC. MCLC will ensure non-system supported unit information, such as "In-Stores," are updated daily.

14. Detailed Reporting. The modernization program for the replacement of PEIs has a substantial effect on MARES reporting. The remarks held within enclosure (3) of this Order provide examples of occasions for the reporting of MARES items.

15. Special Reporting Instructions

a. Activation of New Units

(1) The MEF commander will request assignment of UIC for new units from the CMC (PP&O).

(2) The MEF commander upon receipt of the UIC, will submit a request to CG MCCDC to load the new UIC to the MARES UIC standards data file. The MEF commander will initiate this request at least 30 days prior to unit's activation.

(3) When a unit is reporting an overall SORTS rating of C-5 (service programmed, resource allocation does not permit a higher C-level) the following procedures apply:

(a) Report MARES under the assigned UIC, unit name, major command UIC, and MEF code.

(b) Use type unit code (TUC) 3.

(c) Reported allowance quantities will reflect the full T/O&E authorization.

(4) Resultant MARES Reports:

(a) MARES Unit Report Materiel Readiness percentages will be reported as required by this Order.

(b) Equipment status reports do not reflect TUC 3 units and consequently, do not degrade a major command's readiness status; e.g., TUC 3 units reported data is suppressed.

(5) When the overall resource area ratings reach the C-3 level in SORTS, the MSC will submit a unit file change transaction to the supporting Maintenance Information System Coordinator Office for forwarding to CG MCLC (e.g., former C-5 MARFOR unit is now C-3).

b. Command Adjustments and MAGTF Reporting

(1) To provide accurate on-hand visibility against the various Marine Corps allowance files (e.g., TFSMS, loaded unit allowance files, mechanized allowance lists, etc.) command adjustments will be authorized in writing by the command directing realignment of T/O&E equipment. Examples are:

(a) Formation of a deploying MAGTF (e.g., 22d Marine Expeditionary Unit, Annual US - South American Allied Exercise (UNITAS)).

(b) Formation of a permanent or long-standing detachment (e.g., Chemical Biological Incident Response Force (CBIRF)).

(c) MARFORRES units when their T/As are not equal to a full T/O&E.

(d) Units using a command adjustment will document using a RM4 remark transactions per enclosure (3) of this Order.

(2) Accurate MR reporting for MAGTF organizations requires a coordinated effort between logistics and operations personnel. It is not recommended that MAGTF organizations report in MARES/SORTS when formed for less than 90 days. However, when the decision is made to form a MAGTF reporting unit greater than 90 days, the unit must report the status of its reportable equipment via separate reporting. The MARES asset changes will be closely coordinated between the supporting and task organized units to ensure that simultaneous add/delete transactions between units are accomplished.

(3) If MAGTF procedures are not required/initiated, asset transfers are considered a temporary loan. Temporary loan policy is contained in reference (e). The unit providing the temporary loan remains the owning unit and the status of the equipment must be reported in its MARES report.

16. Responsibilities. Responsibilities are vested in the DC, I&L; CG MCCDC; CG MCLC; CG MCSC; and the MARFOR Commanders as follows:

a. DC, I&L

(1) Approve policy for MARES.

(2) Update the table of items reported through MARES and SORTS.

(3) Evaluate resource reporting procedures used by MARFOR units.

(4) Represent the MARFORs for materiel (ground equipment) readiness inquiries to external agencies (e.g., Department of Defense (DoD) and Congress).

b. DC, CD

(1) Review, validate, and approve changes to T/ E equipment allowances through the application of the Marine Corps Total Force Structure Process for T/ E Change Requests.

(2) Oversee the troop list file and equipment allowance file (EAF), within TFSMS to correctly reflect up-to-date initial issue and sustainment allowances for T/ E items of equipment.

c. Commanders, MARFORs

(1) Reconcile Authorized Allowance files with DC, PP&O, Plans and Operations Readiness (POR) UIC files.

(2) Coordinate UIC file change requests, for submission to CG MCSC to reflect unit activations, deployments, and reorganizations.

(3) Ensure that major commands provide daily readiness updates and reconciliation data to the CG MCSC, to include data-set names and the last report number submitted by each major command.

(4) Establish procedures for deployed automated data support section in order to ensure adequate and timely MARES support for MARFOR units.

(5) Ensure that equipment status transactions are submitted to CG MCLC daily.

(6) Provide Log issues or TAMCN nominations to CG MCSC for the Quarterly Readiness Briefs (QRB) as required.

(7) Establish desktop procedures/turnover files for MARES reporting.

d. CG MCLC

(1) Provide and update electronically at least quarterly, the ground capability database to the CMC (LP) containing designated asset allowances, on-hand, and operational status (to include In-Stores assets).

(2) Provide updated Principle End Item Stratification data on a quarterly basis to MCSC for in-stores inclusion into the Authorized Acquisition Objective (AAO)/Total Marine Corps Readiness postures.

(3) As directed, provide logistics data management support to update MARES.

(4) Recommend TAMCNs to CG, MCSC in support of the Materiel Readiness Briefs. Provide to CMC (LPO-1) a copy of your recommendations.

(5) Support MARES daily reporting on Maritime Prepositioning Ships (MPS) and Norway Air-Landed Marine Expeditionary Brigade (NALMEB) assets.

As directed, provide readiness management analysis in support of inquires from HQMC and external agencies (e.g., Joint Quarterly Readiness Report (JQRR), QRB, Senior Readiness Oversight Council (SROC), testimony, etc.).

e. Commander, Blount Island Command

(1) Conduct MARES daily reporting for MPS and NALMEB assets, including assets downloaded for MPF Maintenance Cycles and organic assets held by the command.

(2) Validate supply and maintenance records to ensure that all trackable PEI's reflect the correct operational status.

(3) Update Authorized Allowance files with DC, PP&O, Plans and Operations Readiness (POR) UIC files.

(4) Establish desktop procedures/turnover files for MARES reporting.

(5) Coordinate UIC file change requests for submission to CG MCSC to reflect ship activations and squadron reorganizations.

(6) Provide daily readiness updates and reconciliation data to CG MCSC, to include data-set names and the last report number submitted.

(7) Ensure that equipment status transactions are submitted to CG MCLC daily.

e. CG MCSC

(1) Input transactions and distribute updated UIC, ID, and TAMCN standards files based on information provided by HQMC and each MSC.

(2) Conduct a reconciliation of the ATLASS/MIMMS database with each MEF's domain monthly. The MCSC reconciliation will be announced by message at least 15 days prior to the prescribed cut-off date.

(3) Support MARES daily reporting on Maritime Prepositioning Ships (MPS) and Norway Air-Landed Marine Expeditionary Brigade (NALMEB) assets.

(4) Provide readiness management analysis in support of inquires from HQMC and external agencies (e.g., Quarterly Readiness Report to Congress (QRRC), JQRR, QRB, SROC, testimony, etc.).

f. SORTS Reporting for MARFOR Units will be conducted per reference (a).

g. MARES Non-Reporting Units:

(1) BPS. BPS are required to report MARES information and are not authorized to deviate from approved ATLASS/MIMMS directives and manuals. This includes equipment listed in a MCBul in the 3000 series, which are held by BPS (e.g., equipment allowance pools, depots, maintenance floats, schools, etc). This policy reinforces the training of individual Marines and facilitates the total materiel requirements and equipment capability-information, when required by the CMC or higher.

(2) Cadre Units. Upon activation, cadre units will report MARES status at the battalion level. UIC's will be reported by the next maintenance management level (e.g., Fleet Anti-Terrorism Security Team (FAST) Company has no maintenance capability and would report under Marine Security Guard Battalion's UIC). Also, a statement will be provided that identifies the unit as cadre and the authority for establishment of the cadre status.

Commanders are responsible for the operational MR and accuracy of reporting their equipment as stated in the commander's T/ E mission statement. Further, they must continually endeavor to achieve the maximum MR given the resources at their disposal. In MARFORRES units that do not possess a T/ E mission statement, their T/ E mission/logistics statement will reflect that of an equivalent active component unit, unless otherwise directed by higher headquarters.

(3) In the event a new/change to the MCBul in the 3000 series is published/received, or a new T/O&E is received, a reconciliation will be conducted prior to the next scheduled database update. To ensure proper reporting, the reporting unit (materiel management personnel) will perform a reconciliation to ensure that records are accurately tracked, recorded, and reported between ATLASS/MIMMS and other agencies files.

(4) All reporting will be reviewed prior to submission for accuracy and completeness, to include clarifying remarks. Commanders will provide procedures to clarify local requirements in equipment tracking and remarks.

17. Applicability. This Marine Corps Order is applicable to the Marine Corps Total Force.

Deputy Commandant
Installations and Logistics

DISTRIBUTION: PCN 10203045100

Copy to: 2300005/7256092 (12)
7230001 (5)
8145001, 7000144, 6901001, 002, 003 (1)

RESOURCE REPORTING METHODOLOGY

1. Overview. The equipment status percentages that appear in the Unit's Resource Report is computed using the formulas and methods discussed below. SORTS equipment percentages convert directly to resource area category levels for SORTS reporting.

2. The calculations for the "S" rating and "R" rating are based on the following guidance:

a. Reportable PEI's percentages are based on all items listed within a MCBUL in the 3000 series.

b. MEE item percentages are based only on those items designated in column 5 of MCBul in the 3000 series.

c. Locally tracked items are not to affect the percentage calculations.

3. Computations for Active Forces:

a. Supply/Equipment On-Hand ("S") Rating Percentages. S is the ratio between the equipment that is possessed and authorized. This rating is derived by dividing the total number of items possessed (on-hand), by the total number of items authorized (T/ E) as demonstrated by the formula below:

$$S = \frac{\text{Possessed}}{\text{Authorized}}$$

NOTE: This formula applies the quantity of equipment on-hand against the requirements determined by CG, MCDDC.

The basic formula is applied differently when calculating rolled up S ratings. There are two conditions that apply:

(1) Rollup on TAMCN (ROT). This condition occurs when S ratings are calculated for individual TAMCNs (e.g. D1062) at any organizational level. For individual TAMCNs, excesses (possessed-authorized) are compared against deficiencies and any net excess (excess-deficiencies) is included in the possessed quantity when calculating S. The basic formula provided above is used in this case.

(2) Rollup across TAMCNs (RAT). This condition occurs when S ratings are calculated for multiple TAMCNs (e.g. all D TAMCNs) at any organizational level, functional area, or commodity. When calculating S ratings across TAMCNs it is imperative that excesses for one TAMCN do not compensate for deficiencies in other TAMCNs during the rollup process, thereby inflating the S and MR ratings for that particular entity. Therefore, before calculating S

across TAMCNs, each individual TAMCN within the entity (e.g. D1062 for I MEF) is rolled up and the net excess (excess-deficiencies) for each TAMCN is computed. RAT correction is done only at the next lower organizational level. For example, if calculating the S rating across all A TAMCNs in I MEF, the net excess for each individual A TAMCN held by the MSCs within the MEF is first calculated. Then all of the net excesses are summed and subtracted from the total number of A TAMCNs possessed by I MEF when calculating the S rating across all A TAMCNs. The formula shown below applies:

$$S = \frac{\text{Possessed} - \text{Net Excess}}{\text{Authorized}}$$

NOTE: If the net excess is greater than zero, the possessed quantity is substituted for the authorized quantity in this formula. This prevents rolled up organizational S ratings greater than 100% due to individual excess TAMCNs with S ratings greater than 100%.

b. Maintenance/Equipment Condition ("R") Rating Percentages. This rating is derived by subtracting the total number of deadlined items from the total number of items possessed, then dividing the difference by the total number of items possess ed (on-hand) as shown below:

$$R = \frac{\text{Possessed - Deadlined}}{\text{Possessed}}$$

c. Materiel Readiness-Rating Percentages (MR).. The measurement of an organization's MR posture. This mathematical relationship is the measure of effectiveness, which reflects the operational capability of Marine Corps ground materiel. MR can never be greater than S.

$$MR = \frac{\text{Possessed} - \text{Deadlined}}{\text{Authorized}}$$

Similar to the S rating rollup calculations, the basic MR formula is applied differently when calculating rolled up MR ratings. When calculating readiness across TAMCNs, if the quantity of excess items exceeds the quantity deadlined, the authorized quantity replaces the possessed minus deadlined quantity as the numerator in the above formula. This is to ensure that rolled up organizational MR ratings do not exceed 100% due to individual TAMCNs with MR ratings greater than 100%.

4. Computations for Reserve Forces. The Reserve forces will perform calculations for SORTS reporting using the unit's T/O&E, and "In-Stores" assets. This reporting provides an overview of the status of procured equipment against the wartime requirement (T/ E), and providing MCLC with an assessment of MARFORRES's immediate asset requirements.

a. Supply/Equipment On-Hand ("S") Rating Percentages. This rating is derived by dividing the total number of items possessed on-hand) and augmented by "applied" in-stores assets, by the total number of items authorized (T/ E) as demonstrated by the formula below:

$$S = \frac{\text{Possessed}}{\text{Authorized (T/A)}}$$

(Possess equals T/A Equipment "On-hand" + Applied In-Stores)
Authorized equals Table of Equipment Allowance

NOTE: This formula applies the quantity of equipment on-hand and in-stores against the requirement determined by CG MCCDC.

b. Equipment Condition ("R") Rating Percentages. This rating is derived by subtracting the total number of deadlined items from the total number of items possessed, then dividing the difference by the total number of items possessed (on-hand) and augmented by total "applied" in-stores assets (RFI and not RFI); as shown below:

$$R = \frac{\text{Possessed - Deadlined}}{\text{Possessed}}$$

NOTE: (Deadined equals T/A Deadlined + NRFI. Possess equals T/A Equipment "On-hand" + Applied In-Stores)

c. Materiel Readiness-Rating Percentages (MR).. The measurement of an organization's MR posture. This mathematical relationship is the measure of effectiveness, which reflects the operational capability of Marine Corps ground materiel. MR can never be greater than S.

$$MR = \frac{\text{Possessed – Deadlined}}{\text{Authorized}}$$

Similar to the S rating rollup calculations, the basic MR formula is applied differently when calculating rolled up MR ratings. When calculating readiness across TAMCNs, if the quantity of excess items exceeds the quantity deadlined, the authorized quantity replaces the possessed minus deadlined quantity as the numerator in the above formula. This is to ensure that rolled up organizational MR ratings do not exceed 100% due to individual TAMCNs with MR ratings greater than 100%.

MATERIEL READINESS REPORTING CALCULATIONS

1. Overview. This enclosure intends to ensure that the statistical calculations for readiness ratings (e.g., MR, R, and S) are performed in a consistent and correct manner. This will provide a more accurate portrayal of readiness ratings by preventing loss of critical readiness rating information when possessed, authorized, and deadlined numbers are rolled up to successively higher levels in time (e.g., day, week, month, year) or by unit (e.g., battalion/squadron, division/wing, MARFOR).

	A	B	C	D	E	F	G	H	I
1	Wk / Month	F/A	TAMCN	Possess	Auth	D/L	MR %	R %	S %
2	WK 1 / Month 1	30	D0000	1,430	1,422	208	86%	85%	101%
3	WK 2 / Month 1	30	D0000	1,429	1,424	175	88%	88%	100%
4	WK 3 / Month 1	30	D0000	1,416	1,412	210	85%	85%	100%
5	WK 4 / Month 1	30	D0000	1,419	1,396	228	85%	84%	102%
6	WK 1 / Month 2	30	D0000	1,418	1,384	193	89%	86%	102%
7	WK 2 / Month 2	30	D0000	1,424	1,391	208	87%	85%	102%
8	WK 3 / Month 2	30	D0000	1,434	1,409	233	85%	84%	102%
9	WK 4 / Month 2	30	D0000	1,422	1,406	264	82%	81%	101%
10									

Table 1: Raw Materiel Readiness Data

2. Table 1 above contains a compilation of 2 months of MARFOR-wide MR data drawn from the Field Maintenance Sub-System (FMSS), for a given TAMCN. Column A contains the week/month of the MR data sampled every Friday from MIMMS through FMSS. Columns B and C hold the FA as defined by a MCBul in the 3000 series and the TAMCN, within that FA being analyzed. Columns D through F provide the sampled MR numbers for possessed, authorized, and deadlined for this given TAMCN. Finally, columns G through I contain the calculated readiness ratings for the given TAMCN, using the data sampled from the Friday of the given week/month.

	J	K	L	M
1	Time Period	MR %	R %	S %
2	Month 1 Avg **(New)**	86.195%	85.587%	100.716%
3	Month 1 Avg (Old)	86.201%	85.591%	100.712%
4	Difference	-0.006%	-0.004%	0.004%
5	Month 2 Avg **(New)**	85.906%	85.241%	101.678%
6	Month 2 Avg (Old)	85.891%	84.265%	101.929%
7	Difference	0.015%	0.976%	-0.251%
8	Two Month Avg **(New)**	86.050%	84.927%	101.324%
9	Two Month Avg (Old)	86.047%	84.928%	101.317%
10	Difference	0.004%	-0.001%	0.007%

Table 2: Statistical Averaging Comparison

ENCLOSURE (2)

3. Table 2 represents an example of comparisons between two different computational methods used to estimate average readiness ratings, for a given period of time. The **New** method (rows 2, 5, and 8 of table 2) calculates the average of the sampled ratings for a given period of time. The **Old** method (rows 3, 6, and 9 of table 2) totals all the sampled possessed, authorized, and deadlined numbers for the specific period and then calculates the ratings using these totals as input. Contained within the shaded rows in table 2 (rows 4, 7, and 10), you will find the difference between the two methods. These methods apply when analyzing a FA or TAMCN rating over time as well as over a number of different units.

RESULT		
$\frac{5{,}693 - 820}{5653}$	=	**86.201%**

Figure 1.---Old Method of Averaging MR Rating.

a. The **Old** method used to estimate an average readiness rating, for a given TAMCN over a set period, is illustrated in figure 1. Figure 1 shows that when using the **Old** method to calculate an estimate of the MARFOR-wide TAMCN - D0000 average MR rating during month 1, four sample observations are totaled for the different variables of possess, authorized, and deadlined. Then these totaled variables are used as input variables to the MR rating equation. The output of the equation estimates the MARFOR-wide average MR rating during month 1 for TAMCN - D0000, the result shown above (e.g., 86.201 percent) is indicative of the underlining computations in column K, row 3 of table 2, preceding. The data used in our example can also be found in table 1 as well. The **Old** method causes the loss of important readiness information by totaling up the numbers before calculating a readiness rating. The New method does not total up numbers, instead, it uses readiness ratings to calculate a statistically robust estimate of the average of interest.

NEW AVERAGING CALCULATIONS						
MR Ratings	85.92%	+ 88.13%	+ 85.41%	+ 85.33%	=	344.78%

RESULT		
$\frac{344.78\%}{4\ \text{Weeks}}$	=	**86.195%**

Figure 2.---New Method of Averaging MR.

b. The **New** method used to estimate an average rating, for a given TAMCN over a set period, is illustrated in figure 2. Figure 2 shows the **New** method to calculate an estimate of the MARFOR-wide TAMCN - D0000 average MR rating during month 1, using the average of four sampled MR ratings. So, we would calculate the average MR rating by totaling the sample

ratings (344.78 percent) and then dividing this total by the number of samples (4). The **New** method results in an average MR rating for that period of 86.195 percent (column K, row 2 of table 2, above), which one might say is not that different from the rate we derived using the **Old** method, a difference of -.006 percent in this case. However, the cumulative effect of these differences (rows 4, 7, and 10 of table 2) borne by the Old method of calculating readiness rates has and will have an impact on the accuracy of MR reporting. By using the **New** method, we do not lose important readiness information that is lost when using the **Old** method of rolling up the numbers before calculating a readiness rating. Thus, by using this **New** method, we capture <u>all</u> of the statistically important information, critical for use when making sound MR decisions. This method renders a statistically robust and accurate picture of readiness ratings for a given FA or TAMCN specific to an organization over a period of time.

DETAILED MATERIEL READINESS REPORTING

1. Detailed Reporting. Instructions for inputting transactions are contained in UM 4790-5. Commanders at all levels will ensure strict adherence to these formats to facilitate the timely and accurate reporting of MARES items. With the limited space available on the LM2 for RM-4 remarks, it is necessary for the remarks to be prioritized. Therefore, all units will ensure that the following RM-4 remarks are entered in the priority sequence listed below:

a. Headquarters Marine Corps (HQMC) Authorized

b. Delta Adjustment (DELTA ADJ) (Reserves Only)

c. Command Adjustment (CMD ADJ)

d. Temporary Loan (T/L) of Equipment

e. T/O&E (T/A) Deficiencies (DEF)

f. T/O&E (T/A) Excesses (EXC)

g. Marine Air-Ground Task Force (MAGTF) Reporting

h. Planned Allowance (P/ALW)

i. Special Allowance (SP/ALW)

j. Table of Equipment Allowance File Challenges (T/E-C)

k. Corrosion Prevention and Control (CPAC)

l. Inter-Service Support Agreements (ISSA) (Reserves Only)

2. The following paragraphs explain why and when each of the RM-4 remarks listed in paragraph 1a through l, above, are used and include examples of each:

a. Headquarters Marine Corps (HQMC) Authorized

(1) This is a required RM-4 remark, and is the first entry made on the LM2:

HQMC AUTH = XXX

(2) Represents the HQMC auth T/E quantity (qty) for a particular TAMCN.

(3) This remark is required for units owning MARES equipment that apply to the unit's T/E, regardless of equipment condition, and provides the frame of reference for the total amount of equipment a unit is authorized in its T/E.

(4) The HQMC Auth Qty entered in the RM-4 remark must be taken directly from the Mechanized Allowance Listing (MAL).

b. Delta Adjustment (DELTA ADJ) (Reserves Only)

(1) This is also a required RM-4 remark, and is the second entry made on the LM2:

DELTA ADJ = XXX

(2) The "DELTA" represents the amount of equipment to be sourced upon mobilization and is derived by subtracting the T/A Poss qty from the HQMC Auth qty.

c. Command Adjustment (CMD ADJ)

(1) Used to transfer MARES equipment from one command to another.

(2) The following RM-4 remarks apply for equipment transferred:

(a) From the supporting unit (the command adjustment quantity to the gaining command as applicable):

CMD ADJ QTY XXX to MXXXXX

(b) To the gaining unit (the command adjustment qty from the supporting command as applicable):

CMD ADJ QTY XXX FM MXXXXX

d. Temporary loan (T/L) of equipment

(1) From the supporting unit

T/L QTY XXX TO MXXXXX DOR 10MAR01 IAW CG LTR 1ST MAW 4400/4SUP/1MAR01

(If a message is used, insert the message info in place of the letter info. For example: CG 1ST MAW 030400ZMAR01.) Note: Do not adjust the AUTH and POSS quantity.)

(2) To the gaining unit

T/L QTY XX FROM MXXXXX DOR 10MAR01 IAW CG LTR 1ST MAW 4400/SUP/1MAR01.

(If a message is used, insert the message info in place of the letter info. For example: CG 1ST MAW 030400ZMAR01.) Note: Do not adjust the AUTH and POSS quantity.

e. T/O&E Training Allowance (T/A) Deficiencies (DEF)

(1) A command/unit will have on-hand or a valid requisition for all T/O&E T/A reportable PEI allowances, unless otherwise directed by higher authority.

(2) The MARES Unit Report will reflect MARES reportable equipment T/A or T/O&E deficiencies, and contain RM4 remarks in the following format:

T/O&E (T/A) DEF QTY XXX, DOC# /STATUS/STATUS DATE (JULIAN)/LAST KNOWN HOLDER (LKH).

f. T/O&E (T/A) Excesses (EXC)

(1) Equipment Excesses Resulting from Modernization. Should force-fed equipment cause an excess, the receiving unit will report the equipment pending resolution of the Table of Organization and Equipment Change Request (T/O&ECR) and/or receipt of disposition instructions. If the item is a replacement for a reportable item, the reporting unit will make compensatory allowance changes to reflect an excess, and current capability (e.g., if 3 MRC-145's are received for 3 MRC-110's, the allowance for the MRC-110's would now reflect 0). Additionally, a RM4 would now reflect 0). Additionally, a RM4 remark will be submitted explaining the excess and reference the appropriate correspondence. For allowances not resolved with disposition instructions, reduce quantities to corrected amount (e.g., authorized equal 0). Use the RM4 remark until T/O&ECR is approved or resolved.

DISP RECD QTY XXX ON WIR DOCNR MXXXXX-XXXX-EXXX DTD (JULIAN)
DISP REQUESTED QTY XXX, DATE (JULIAN)
and/or
T/O&ECR FOR QTY XXX, DATE (JULIAN)

(2) Equipment Excesses Pending T/O&ECR. The receiving unit will report the equipment pending resolution of the T/O&ECR and/or receipt of disposition instructions. An RM4 remark will be submitted explaining the excess and referencing the appropriate correspondence.

(3) Disposition instructions for excess MARES reportable items are requested per MCO P4400.82 after internal MSC deficiencies are screened.

(4) A request for disposition instructions (WIR) does not authorize a command/unit to reduce the possessed quantities of the MARES Unit Report. When disposition instructions have been received and the appropriate action has been taken, the possessed quantities can then be reduced.

g. Marine Air-Ground Task Force (MAGTF) Reporting

(1) The unit providing equipment to a MEU/MEB will first make an LM2 asset change transaction reducing both authorized and possessed quantities by a quantity equal to the number of assets provided. Then submit an RM-4 remark citing only the quantity of equipment deployed (DPYD) and the reporting unit code (RUC) of the MAGTF unit:

DPYD QTY XXX TO MXXXXX

(2) The MAGTF unit receiving the equipment will input an LM2 transaction increasing both the authorized and possessed quantities by a quantity equal to the number of assets received, and then submit an RM-4 remark citing only the quantity of equipment received and the RUC of the providing unit:

T/E=XXX, DPYD QTY XXX FR MXXXXX

(3) Close coordination between the unit providing equipment and the MAGTF unit receiving equipment is paramount to ensure accurate reporting.

h. Planned Allowance (P/ALW)

(1) Planned Allowance to Actual Allowance. When a planned allowance is received, the receiving unit will submit a T/O&ECR to the CG MCCDC, per MCO 5311.1 requesting the "planned" allowance be made "actual."

(a) The receiving unit will increase the unit's LM2 report auth and poss quantity by the number of PEIs received to reflect "Poss = Auth."

The quantity "Possessed" will be used for "Authorized"

(b) The new equipment will be documented in the RM4 remarks as follows:

P/ALW QTY XXX FOR FY-XX, QTY XX RECV T/O&ECR DTD (JULIAN)

(c) Once all the planned allowances appear as actual allowances on the unit’s Table of Equipment, remove the RM4 remarks on planned allowances.

(2) P/ALW will only be placed on the LM2 when the unit actually possesses at least one item from the P/ALW.

(3) If all P/ALW items have been received, and are still identified on the EAF as a P/ALW, the unit will request the P/ALW be changed to an actual allowance.

i. Special Allowance (SP/ALW)

(1) Cite the quantity of equipment authorized and the letter/message authorizing equipment in excess of your unit's T/A to be on hand using the following RM-4 remark:

SP/ALW/QTY XXX/CMC LTR LPP-4/4441/11MAR01.

(2) Once the SP/ALW appears on the T/E, cite the quantity of the SP/ALW and the date of the T/E using the following RM-4 remark:

SP/ALW/QTY XXX/T/E 2MAR01

(3) Once the SP/ALW becomes part of the unit's T/E, and is no longer reported on the unit's T/E as a SP/ALW, the RM-4 remark must be removed from the LM2.

j. Table of Equipment Allowance File Challenges (T/E-C).

(1) When units receive new monthly EAF'S, and a T/E authorized allowance change appears (increases or decreases) for no apparent reason, the owning unit must request a T/E-C to the appropriate unit supply office.

(2) Show the EAF challenge quantity and the unit letter in the LM2 using the following RM-4 remark:

T/E-C QTY XXX, MACG-xx LTR 4400/SUP/3MAR01

(3) Units will not adjust the authorized allowance on the LM2 until they have received a response to their T/E challenge.

(4) Once a response is received, and the unit has:

(a) Won the T/E challenge, the unit must remove the T/E-C RM-4 remark, and will not adjust the auth allow quantity on the LM2.

(b) Lost the T/E challenge, the unit must replace the T/E-C RM-4 remark with an appropriate RM-4 remark, if required, and either increase or decrease the authorized quantity on the LM2 as listed on the challenged EAF.

k. Corrosion Prevention and Control Program (CPAC):

(1) Units that evacuate equipment under the CPAC program for work outside a 200-mile radius of the owning unit location will report the equipment as Not Mission-Capable Maintenance (NMCM) regardless of the condition of the equipment. Furthermore, all equipment in Corrosion Category "C" (see MCO 4790.18), regardless of distance, will be reported as NMCM. The equipment will be documented in the RM4 remarks by the following:

CPAC QTY XXX, DATE (JULIAN)

(2) Upon evacuation of the equipment, use the following RM-4 Remark:

CPAC QTY XXX, SERIAL NUMBER, DATE (JULIAN) TO M66666.

(3) Ensure the UIC of "M66666" is used as the holder of the equipment in the RM-4 remark to identify to all concerned (ALCON) that this equipment is undergoing CPAC repairs.

l. Inter-service Support Agreement (ISSA)

(1) When an Inter-service Support Agreement (ISSA) is used, an organizational ERO must be opened by the owning unit using job status "38" (Evc-Hech) and a destination account of M66666.

(2) In addition, an RM4 remark will be submitted for readiness reportable equipment stating the actual location of the item:

QTY XXX AT MXXXXX/LOCATION

3. Contractor Furnished Materiel. Commands/units that hold readiness reportable equipment furnished by a contractor will not report that equipment on their MARES Unit Report.

4. Reconciliation between the Mechanized Allowance List and the MARES report will be conducted per MCO P4790.2.